WHAT IS CLAIMED IS:

1. In a process for making an absorbent sheet material from a web of fibrous material consisting predominately of cellulosic recycle fiber, the improvement which comprises treating the fibrous material with a debonding composition which includes a synergistic combination of:

(a) a quaternary ammonium surfactant component; and

(b) a nonionic surfactant component;

wherein the debonding composition is operable to reduce the tensile strength of said sheet by at least about 25 percent by application to said fibrous material at a treatment level of 1 mole of said quaternary ammonium surfactant component per ton of fibrous material.

2. The improvement according to claim 1, wherein debonding composition is operable to reduce the tensile strength of said sheet by at least about 40 percent by application to said fibrous material at a treatment level of 3 moles of said quaternary ammonium surfactant component per ton of fibrous material.

3. The improvement according to claim 1, wherein from about 1 to about 16 pounds of said debonding composition are employed per ton of absorbent sheet material produced.

4. The improvement according to claim 1, wherein from about 3 to about 8 pounds of said debonding composition are employed per ton of absorbent sheet material.

5. The improvement according to claim 1, wherein from about 4 to about 6 pounds of said debonding composition are employed per ton of absorbent sheet material.

6. The improvement according to claim 1, wherein said nonionic surfactant component is present in said debonding composition in an amount of from about 25 to about 60 weight percent based on the combined weights of said nonionic surfactant component and said quaternary ammonium surfactant component.

7. The improvement according to claim 6, wherein said nonionic surfactant component is present in said debonding composition in an amount of from about 30 to about 50 weight percent based on the combined weights of said nonionic surfactant component and said quaternary ammonium surfactant component.

8. The improvement according to claim 1, wherein said recycle fiber has an ash content greater than about 0.75 percent by weight.

9. The improvement according to claim 8, wherein said recycle fiber has an ash content greater than about 1 percent by weight.

10. The improvement according to claim 9, wherein said recycle material has an ash content greater than about 2 percent by weight.

~~11. The improvement according to claim 1, wherein said quaternary ammonium surfactant component includes an imidazolinium salt.~~

~~12. The improvement according to claim 1, wherein said nonionic surfactant component includes a surfactant selected from the group consisting of alkoxylated fatty acids and alkoxylated fatty alcohols.~~

13. The improvement according to claim 12, wherein said nonionic surfactant component is an ethoxylated fatty acid.

14. The improvement according to claim 13, wherein said nonionic surfactant component is a polyethylene glycol ester of a fatty acid and said quaternary ammonium surfactant component includes an imidazolinium salt.

15. In a process for making an absorbent sheet material from a web of fibrous material consisting predominately of cellulosic recycle material, the improvement which comprises treating the fibrous material with a debonding composition which includes a synergistic combination of:

(a) a quaternary ammonium surfactant component; and

(b) a nonionic surfactant component;

wherein the debonding composition is operable to reduce the tensile strength of said sheet by at least about 40 percent.

16. The improvement according to claim 15, wherein said fibrous material is at least about 75 percent by weight of cellulosic recycle material.

17. The improvement according to claim 16, wherein said fibrous material is 100 percent by weight of cellulosic recycle material.

18. In a process for making an absorbent sheet material from a web of fibrous material consisting predominately of cellulosic recycle fiber, the improvement which comprises treating the fibrous material with a debonding composition which includes a synergistic combination of:

(a) a quaternary ammonium surfactant component; and

(b) a nonionic surfactant component;.

wherein said nonionic surfactant component is selected from the group consisting of group c, d or e and wherein group:

(c) are monoalkylated nonionic surfactants comprising alkoxylated fatty acids or alkoxylated fatty alcohols having an **HLB** value of greater than about 10 wherein said fatty acids and fatty alcohols have 12 carbon atoms or more;

(d) are dialkylated nonionic surfactants comprising alkoxylated fatty acids or alkoxylated fatty alcohols with an **HLB** value of greater than about 10 wherein said fatty acids or fatty alcohols have about 16 carbon atoms or more;

(e) are dialkylated nonionic surfactants comprising alkoxylated fatty alcohols or alkoxylated fatty acids having an **HLB** value of less than bout 10 and wherein said fatty alcohols and fatty acids have about 16 carbon atoms or less.

19. The improvement according to claim 18, wherein said nonionic surfactant includes a fatty acid or fatty alcohol component with at least about 18 carbon atoms.

20. The improvement according to claim 18, wherein said nonionic surfactant comprises a fatty acid monoester of a polyethylene glycol.

21. A method of forming an absorbent paper comprising:

(a) preparing a recycle furnish comprising predominantly recycle fibers in an aqueous stream;

(b) adding a debonder composition to said furnish, said debonding composition including a quaternary ammonium surfactant component and a nonionic surfactant component;

(c) supplying said aqueous stream to a headbox;

(d) applying said furnish to a forming wire and forming a nascent web; and,

(e) drying said web to form said absorbent paper product,

wherein the debonding composition is operable to reduce the tensile strength of said absorbent paper product by at least about 25 percent by employing said debonder composition at a level of 1 gram mole of said quaternary ammonium surfactant component per ton of said absorbent paper product.

22. The method according to claim 21, wherein said nonionic surfactant component comprises a surfactant selected from the group consisting of alkoxylated fatty acids and alkoxylated fatty alcohols.

23. The method according to claim 22, wherein said nonionic surfactant component comprises a polyalkoxy ester.

24. The method according to claim 23, wherein said nonionic surfactant component is a polyethylene glycol ester.

25. The method according to claim 22, wherein said nonionic surfactant component is a polyethylene glycol ester of a fatty acid selected from the group consisting of: lauric acid, palmitic acid, oleic acid, stearic acid, myristic acid, arachidic acid, lignoceric acid, palmitoleic acid, linoleic acid, arachidonic acid and mixtures thereof.

26. The method according to claim 25, wherein said fatty acid is lauric acid.

27. The method according to claim 21, wherein said quaternary ammonium component includes a quaternary ammonium species selected from the group consisting of: an alkyl(enyl)amidoethyl-alkyl(enyl)-imidazolinium, dialkyldimethylammonium, or bis-alkylamidoethyl-methyl-hydroxyethylammonium salt; wherein the alkyl groups are saturated, unsaturated, or mixtures thereof, and the hydrocarbon chains have lengths of from ten to twenty-two carbon atoms.

28. The process according to claim 21, wherein said recycle furnish comprises at least about 75 percent by weight recycle fiber based on the weight of fiber in the furnish.

29. The process according to claim 28, wherein said recycle furnish is 100 percent recycle fiber.

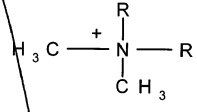
30. The process according to claim 21, further comprising the step of creping said absorbent paper product.

31. ~~In a process~~ for making an absorbent sheet material from a web of fibrous material consisting predominately of cellulosic recycle fiber, the improvement

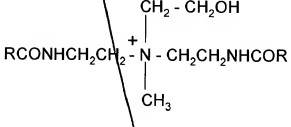
which comprises treating the fibrous material with a debonding composition which includes a synergistic combination of:

(a) a quaternary ammonium surfactant component comprising a surfactant compound selected from the group consisting of:

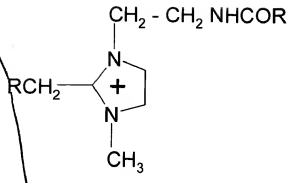
a dialkyldimethylammonium compound of the formula:



a bis-dialkylamidoammonium compound of the formula:



; and a dialkylmethylimidazolinium compound of the formula:



wherein each R may be the same or different and each R indicates a hydrocarbon chain, saturated or unsaturated, having a chain length of from about twelve to about twenty-two carbon atoms; and wherein said compounds are supplied to the fibrous material with a suitable anion; and

(b) a nonionic surfactant component.

32. The improvement according to claim 31, wherein said surfactant compound is a alkyl(enyl)amidoethyl-alkyl(enyl)-imidazolinium compound.

32. The improvement according to claim 31, wherein said suitable anion is methylsulfate.

34. The improvement according to claim 31, wherein said nonionic surfactant component comprises the reaction product of a fatty acid or fatty alcohol with ethylene oxide.

35. The improvement according to claim 34, wherein said nonionic surfactant component comprises a polyethylene glycol ester of a fatty acid.

36. A method for forming a soft absorbent tissue product comprising:

supplying a furnish comprising predominately recycle cellulosic fibers in an aqueous stream;

adding a charge modifier to said furnish wherein said charge modifier contacts said furnish for a time sufficient to reduce the charge in the furnish;

adding a debonder composition comprising a synergistic combination of a quaternary ammonium surfactant component and nonionic surfactant component and optionally adding a wet-strength-adjusting agent to said furnish, after said charge has been reduced;

adding a retention aid to said furnish after said debonder or wet strength adjusting agent has been in contact with said furnish for a time sufficient to allow distribution of said debonder or wet strength adjusting agent on said fibers;

supplying said furnish to a headbox, and wherein said furnish has a consistency of not greater than 0.90% as supplied to the headbox;

applying said furnish to a forming wire and forming a nascent web; and

drying said web to form a paper product.

37. The method according to claim 36, wherein said drying step comprises: compactively dewatering said nascent web; applying said web to a Yankee dryer and drying said web; and creping said web from said Yankee dryer at a moisture content of less than about 50% .

38. The method according to claim 37, wherein the moisture content during creping is less than about 15%.

39. The method according to claim 37, wherein the moisture content during creping is less than about 6%.

40. The method according to claim 36, wherein the consistency of the furnish as supplied to the headbox is less than about 0.7%.

41. The method according to claim 40, wherein the consistency of the furnish as supplied to the headbox is less than about 0.5%.

42. The method according to claim 36, wherein the furnish contains greater than about 1% ash.

43. The method according to claim 36, wherein the furnish contains greater than about 2% ash.

44. The method according to claim 36, wherein the furnish contains only recycled fibers.

45. The method according to claim 36, wherein the charge modifier is added in an amount of from about 1 lb/ton to about 10 lbs/ton.

46. The method according to claim 45, wherein the charge modifier is aded in an amount of from about 2 lbs/ton to about 6 lbs/ton.

47. The method according to claim 36, wherein the debonder composition contains an imidazolinium compound.

48. The method according to claim 36, wherein a wet-strength-adjusting agent is added.

49. The method according to claim 48, wherein the wet-strength-adjusting agent is added in an amount of from about 4 lbs/ton to about 30 lbs/ton.

50. The method according to claim 36, wherein said drying is through-air drying.

51. The method according to claim 36, wherein the furnish contains greater than about 4% ash.

52. The method according to claim 36, wherein said tissue product is a single-ply tissue product.

53. The method according to claim 52, wherein said drying step comprises compactly dewatering said nascent web; applying said web to a Yankee dryer and drying said web; and creping said web from said Yankee dryer.

54. The method according to claim 52, wherein said furnish comprises only recycle cellulosic fibers.

55. The method according to claim 52, wherein said nonionic surfactant component is selected from the group consisting of alkoxylated fatty acids and alkoxylated fatty alcohols.

add C'

add D'

add E'